

CLAIMS

WHAT IS CLAIMED IS:

1. A pneumatic tire having at least a pair of parallel annular beads or bead-like structures in association with a carcass ply, belt or breaker reinforcement disposed over a crown area of said carcass ply, tread disposed over said belts or breakers, and sidewalls disposed between said tread and beads or bead-like structures, wherein said tire has an asymmetric profile wherein the highest point in the tread is located between the centerline of the tread and the shoulder of the tread at 15% to 85% of the distance from the centerline to the shoulder of the tread.

2. The pneumatic tire of claim 1 wherein the highest point in the tread is 3 inches (7.62 cm) from said centerline (CL).

3. The pneumatic tire of claim 1 wherein the tread at its highest point is 0.127 to 5 cm higher than the tread at a corresponding point in a tread half on an opposed side of said centerline (CL).

4. The pneumatic tire of claim 1 wherein the highest point in said tread is 0.127 to 1.27 cm higher than a corresponding point in a tread half on an opposed side of said centerline (CL).

5. A pneumatic tire having a pair or annular beads or bead-like structures in association with a carcass ply, belt or breaker reinforcement disposed over a crown area of said carcass ply, tread disposed over said belts or breakers, and sidewalls disposed between said tread and said beads or bead-like structures, wherein the tire has an asymmetric profile wherein a peak (P) in the tread has a height and location defined by the formulae $P = (\sin C \cdot W) - (N/K)$ and $L = 1/2 W - (.3P/\sin C)$

L is the distance of Peak shift from the centerline

P is the maximum differential in mold geometry from side to side

K is tire vertical spring rate

S is sidewall length

W is tread width

C is the average dynamic camber, and
N is the normal load.